

Application # FA1- 00607-1 (CIRM Institute)

PROPOSAL:

This application proposes construction of a new five-story building (one floor of which will be below grade) that would house stem cell researchers from four institutions that have formed a consortium. This is the only consortium formed in response to this RFA. The consortium building would allow co-location of stem cell researchers based at the member institutions.

The 130,907 gross square foot (gsf) building is designed to provide a total of 100,572 assignable square feet (asf) and includes some space that would be assigned to non-CIRM research activities, but could be devoted to stem cell research at some point. This non-CIRM space is not included as part of the CIRM proposal and therefore would not be subject to the CIRM requirement that CIRM funded space must be reserved for stem cell research for 10 years.

The application indicates that space committed to the stem cell program amounts to 71,332 asf and the non-CIRM space amounts to 29,240 asf. For purposes of establishing the facilities costs attributable to the CIRM proposal, the applicant indicates that laboratory costs have been allocated based on one floor being non-CIRM funded space and two floors being CIRM funded, representing a base allocation of 33.3 percent non-CIRM space and 66.7 percent being CIRM funded space. The applicant, however, has allocated ancillary and support spaces between the two major building programs and allocated building costs using a different allocation. For instance, 100 percent of the space and related costs for the entry atrium, auditorium space, building wide circulation, mechanical spaces and rest room space are allocated to the CIRM funded portion of the building. Thus, based on the applicant's allocation, CIRM funded space is 71 percent of the total space and non-CIRM funded space is 29 percent of the total.

The applicant proposes CIRM funding of \$50 million towards a total project cost of \$115.2 million. The project provides the opportunity to co-locate stem cell researchers by providing laboratory, laboratory support space and new core facilities consisting mainly of new vivarium space and related office, administrative and support space. At occupancy, the facility will house 21 research teams (PIs), 18 of which will be relocating from their home member institutions to the new consortium building. Completion of the project is scheduled for July 2010.

Space Summary Table

Space Category	Amount of Space (asf)	Percent of Total	Asf per PI at 21 PIs
Lab, Lab support & PI off	25,840	36%	1,231
Core Facilities	20,165	28%	960
Other Offices	16,234	23%	773
Admin and support	9,093	13%	433
Total	71,332	100%	3,397

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STAFF ANALYSIS

VALUE:

Costs:

Cost Summary Table

Cost Category	Total Amount	Amount/PI@21
Building	\$78,578,481	\$3,741,832
Group 2 Equipment	22,149,468	1,054,737
Subtotal	100,727,949	4,796,569
Land Value	14,474,077	689,242
Total	\$115,202,026	\$5,485,811
CIRM Amount	\$50,000,000	\$2,380,952
Applicant Amount	\$65,202,026	\$3,104,858

We have two concerns regarding the applicability of some of the proposed costs that are being assigned to the CIRM project.

1) **Land costs:** CIRM's Grant Administration Policy provides that:

“Project leverage includes funds expended on the CIRM funded project from other than CIRM or matching funds including: (1) funds used to purchase land and/or a building at the documented cost to the institution; (2) funds used or budgeted to purchase the initial complement of research equipment (Group 2 equipment) to be located in the CIRM funded facility at the time it becomes operational; and (3) other capitalized project costs including funds expended at any time for planning, design or partial construction of the CIRM funded project.”

The applicant indicates that land to be used for the building, parking facilities and open space has a calculated value of \$14.5 million. The seven-acre parcel is currently under the control of the Regents of the University of California, whose researchers will initially occupy 61 percent of the CIRM space. The land is being made available to the consortium under a ground lease arrangement, with the land and all building improvements to revert to the University of California upon expiration of the ground lease. Because the applicant has included the value of land, rather than its cost as stated in GAP, it is not clear what amount of land costs should be considered part of the CIRM funded project and part of the project leverage.

2) **Allocation of building elements.** A review of the space plan reveals that in some cases, 100 percent of the cost of building elements are attributed to the CIRM project, even though this space is also available to other building occupants

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that are not part of the CIRM Institute. Over one-third of the space included in the CIRM space program is for space that is classified as “other office” (other than PI office) space (16,234 asf) or administrative and support space (9,093 asf). The amount of space devoted to these functions is higher than the other applications in this category and in comparison to typical laboratory buildings. This space is attributable to lobby space, informal gathering spaces, “copious internal and external meeting spaces,” and a major auditorium space. The applicant treats all these spaces as part of the CIRM Institute, although it does not treat one-third of the laboratory space in the building as part of the CIRM Institute. These amenities will surely be attractive to the occupants of the space not attributed to CIRM, and are intended to attract researchers based at the consortium’s constituent institutions.

It is important that the costs associated with the building be apportioned on a fair and equitable basis relative to the space committed to CIRM and its mission. The applicant indicates (see March 25 comment letter) that the lobby, auditorium, and conference spaces are “scholarly activity” spaces intended to be inviting to outside researchers and therefore, the full cost of these spaces has been included in the CIRM funded project. Moreover, the applicant indicates that access to these elements will be limited for the non-CIRM space occupants.

While there may be programmatic rationale to allocate the above noted spaces to the CIRM funded program, there remains non-assignable area (30,335 gsf) for building circulation, mechanical space, rest rooms and such that is fully allocated to the CIRM funded project, while it would seem non-CIRM users of this building would want to utilize these building elements rather than have access to those spaces restricted.

When building improvements and equipment costs (excluding land) are considered, the estimated total project cost is \$100,727,949 with a building cost of \$62.1 million, project management and administrative costs of \$7.6 million, and a contingency set-aside of \$8.9 million. Group 2 Equipment items to be purchased as part of the project amount to \$22.1 million. There is no existing equipment to be relocated to the facility. The Group 2 equipment budget is \$242/gsf which is substantially higher than most of the other projects in this category.

The overall building cost (excluding land) is \$773/gsf. This cost is lower than all other proposals in the category of CIRM Institutes that has an average of \$938/gsf. This raises concerns that some elements of the project may be under-budgeted and may not be fully operational at project completion. For example, core space including vivarium space is budgeted at costs modest in comparison to those typical for these facilities, and some of the equipment needed to operate a vivarium (such as cage washers and steam sterilizers) are omitted from the current estimate. The application also indicates that a modular laboratory bench system will be employed with piped gases and utilities distributed within hollow portions of the laboratory furniture rather than the conventional method.

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The CIRM cost for laboratory and PI related space (excluding cores) is \$1,707,876 per PI, which is slightly higher than the \$1,620,927 average for CIRM Institute applications.

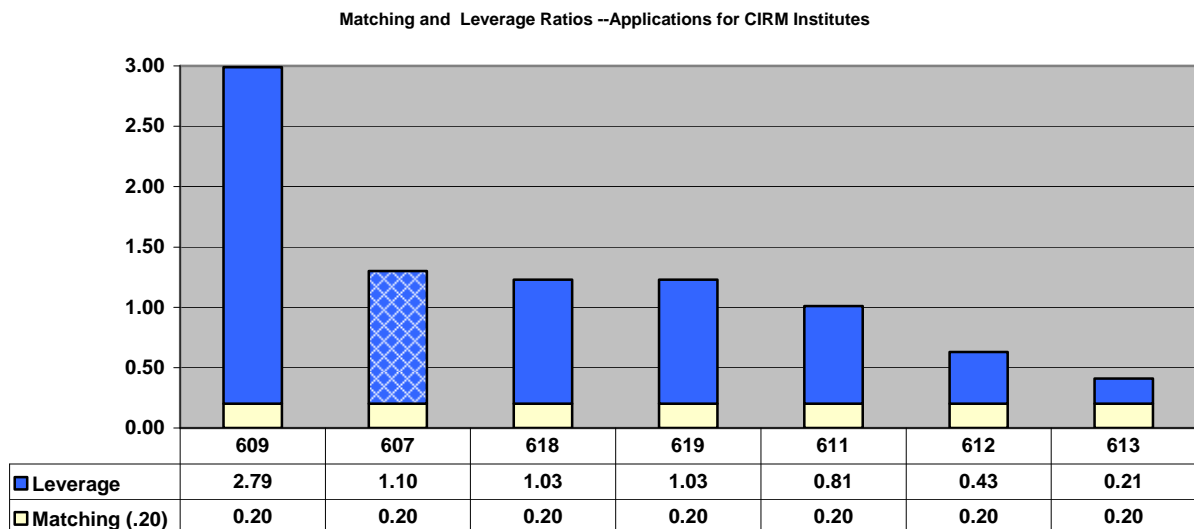
Sustainability & Innovation

The application states that based on the firm points assigned under the scoring system for LEED certification, the design is at the Silver level. Additional points that are in the questionable category are being evaluated with the expectation that additional points will be confirmed so that the design can achieve a certification at the Gold level.

The innovation of this proposal is the formation of a consortium that will allow researchers from several institutions to co-locate and collaborate in ways that would not otherwise be possible. Other elements the applicant cites as innovative include a highly flexible casework/laboratory furnishings system, use of disposable caging in a portion of the vivarium, and an abundance of formal and informal gathering spaces to facilitate interactions among researchers, both on-site and based at the consortium members' home sites.

LEVERAGE:

The application includes leverage of \$55,202,026. This amount includes \$14,474,077 as the present value of the ground lease for the building site. Leverage is the institutional investments in excess of the required matching funds after conforming to the allowable amount for fees and administrative costs. The CIRM funds to leverage ratio is 1:1.10. When both matching and leverage funds are considered, this ratio rises to 1:1.30. The following table compares the leverage for this application (crosshatched) to the other applicants in the category of CIRM Institutes.



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URGENCY:

The applicant began planning the project in 2007. The project will have two phases of development, consisting of construction of the shell followed by building interior fit-up. The project schedule indicates that design work will be completed in August 2008 and the project is scheduled for design review and certification of the Environmental Impact Report by the Regents of the University of California in November 2008. The application for a required California Coastal Development Permit will be submitted in August 2008, with approval expected in December 2008. Construction is scheduled to begin in January 2009 and be completed in June 2010. The project qualifies for priority consideration because completion is projected within two years from approval of the grant.

We note that on-time completion depends on securing several key external approvals. Delays in the project could result if these third-party approvals related to design review, environmental review and the coastal permit are not timely obtained.

The applicant's team for managing delivery of the project is experienced in laboratory construction with five of the 26 projects cited as examples of their track record being laboratory projects.

SHARED RESOURCES:

This proposal is the result of key leaders from four institutions agreeing to cooperate in the development of a highly collaborative initiative aimed at intensifying stem cell research in this state. The applicant indicates that existing facilities available to the members will create an extensive network of technology cores in the area.

Our analysis indicates that given the nature of the consortium, there is a high likelihood of shared use by stem cell researchers. The applicant all indicates (see March 25 comment letter) that "Owing to extraordinary spatial or environmental requirements for which substantial investment elsewhere has already been made, engineering, large animal facilities, clinical care centers and GMP facilities could not be reasonably or cost effectively established in the Facility."

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Cores:

- Animal Facility
 - Caging
 - Transgenic Procedures
 - Knockout Procedures
 - Small animal procedure/surgical rooms
- MRI
- X-ray
- Ultrasound/Echocardiography
- PET
- microPET
- microSPECT
- microCT
- In vivo Imaging Systems (Xenogen)
- Light Microscopy
 - Fluorescence
 - Widefield fluorescence/brightfield DIC
 - Inverted (tissue culture cells)
 - Inverted (time lapse)
 - Image Restoration
 - Confocal
 - Upright Laser scanning
 - Inverted Laser scanning
 - NLO Multiphoton Microscope system
 - Laser Dissecting Microscope
- Electron Microscopy
 - Transmission Electron Microscope
 - Scanning Electron Microscope
- Stem Cell Bank/Registry
- Human Disease Cell Bank
- Flow cytometry – Sorter
- Flow cytometry – Analyzer
- SNP Genotyping
- DNA Sequencer
- Gene Expression Analysis
- RT-PCR (quantitative)
- Functional Genomics (SiRNA/microRNA database) & vector development
- Surface Plasmon Resonance

FUNCTIONALITY:

As mentioned in the discussion on value, the space plan for this building includes a generous amount of space for building amenities and support activities. Laboratory and laboratory support space are both “horizontally and vertically integrated.” The amount of laboratory support space is appropriate for this size facility.

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SUMMARY OF ISSUES FOR THE FACILITIES WORKING GROUP EVALUATION

- **Leverage:** How will the FWG consider land cost included in the application as leverage that is based on the value of the property rather than the cost to the applicant as specified in CIRM's Grant Administration Policy.
- **Functionality:** How will the FWG consider project costs for space that supports the CIRM funded program defined by the applicant and also supports other non-CIRM research activities for which full costs have been allocated to the CIRM program?